

Scientific Exploration of a Watershed
Saturday October 4, 2003
(0.5 recertification credit)
Sponsored by
Carson Water Subconservancy District
Comstock Science Teacher's Association
Nevada Division of Environmental Protection

This program is intended to promote overall awareness of the Carson River Watershed offering Nevada science standards supported curriculum and supporting teachers to develop watershed units within their curriculum.

Introduction and Coordinating Day's Activities **8:00am**
Bureau of Land Management Office
5665 Morgan Mill Dr.
Carson City, NV

Site 1 - Ambrose Restoration Area **8:30 – 10:45am**
Physical Assessment - Jane Schmidt, Natural Resource Conservation Service

What is Physical Assessment?
How can I conduct a physical assessment with my students?
A practical approach on physical assessment
Assessing Physical/Habitat quality of a stream reach and its biological communities
Green line technique - evaluating plant communities to help make decisions
How plants stabilize stream banks

Restoration Projects - Kevin Piper, Dayton Valley Conservation District;
Paul Pugsley, Carson Valley Conservation District

What is river restoration and how do I teach it?
Natural states of streams and rivers
Discussion of Carson River restoration projects
Important consideration before and after undertaking restoration efforts
River function, stream banks, and vegetation

Physical/Habitat demonstration activity

Site 2 - Spot off Mexican Dam (riffle section) **11:00 – 12:30pm**
Biological Monitoring & Macroinvertebrates – Dr. Richard Vineyard, NV Dept of Education;
Linda Conlin, River Wranglers Coordinator;
Jeff Johnston, Pa Wa Lu Elementary School

Biological Monitoring vs Bioassessment?
Biotic Communities: Aquatic Vertebrates, Invertebrates, Periphyton & Phytoplankton
When to sample Benthic Macroinvertebrates (BMIs)
Preparation for sampling
Practical strategy for selecting sample locations
Filling Out the Field Paperwork

BMI sampling exercise

Site 3 – Silver Saddle Ranch – working LUNCH

1:00 – 3:15pm

Bring your own lunch

How to bring the river to your classroom and your classroom to the river

- Genie Azad, Carson Water Subconservancy District;
- Mary Kay Riedl, Nevada Division of Environmental Protection

Carson River Watershed Map

Powerpoint presentation

Lesson plans : 1st level, 2nd level, 3rd level

CWSD website (Measure Your Learning, Feature Essays, Student Monitoring)

Concepts of a Watershed

Groundwater model / activity

Surface Water model - Urban runoff

Activity - There is No Point to This Pollution



Site 4 – Clear Creek –

3:30 – 4:30pm

Water Quality Chemistry – Randy Pahl, Nevada Division of Environmental Protection;

Linda Conlin, River Wranglers Coordinator

Overview of Water Chemistry: Water Temperature, Conductance, pH, Dissolved Oxygen, Turbidity, Fecal Bacteria, Hydrocarbons, Metals (copper, lead, zinc, mercury, arsenic), Phosphorus, Nitrates

World Monitoring Day – What Can I Do?

Student monitoring abilities and techniques

Water quality sampling exercise

Bodine's Mixer

4:30- 5:30pm

Comstock Science Teachers Association – Eric Anderson, CSTA

Closing Remarks

No Child Left in the River

Certificates

Door Prizes!!!